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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/538,388

06/13/2005

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EXAMINER

TAI, XIUYU

ART UNIT

PAPER NUMBER

1795

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/538,388	<b>Applicant(s)</b> KIM ET AL.	
	<b>Examiner</b> Xiuyu Tai	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-31 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

**Group I**, claim(s) 1-4, drawn to an electrode plate for a plasma reactor

**Group II**, claim(s) 5-31, drawn to a plasma reactor,

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Where the group of inventions is claimed in one and the same international application, the requirement for unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression “**special technical features**” shall mean those technical features that define a contribution which each of the claimed inventions considered as a whole , **makes over the prior art**. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, although they share the special technical feature, this special technical feature does not define a

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contribution over the prior art for the following reasons: “an electrode plate for a plasma reactor comprising a dielectric member and an electrode protected from a discharge space by the dielectric member ” is the special technical feature linking Group I and Group II. “an electrode plate for a plasma reactor comprising a dielectric member and an electrode protected from a discharge space by the dielectric member” is known in the art, such as “U.S. 6,464,945. Accordingly, the special technical feature does not provide a contribution over the prior art. Therefore the restriction is appropriate.

3. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1. If applicant elects **Group II**, applicant must further elect one of each of the following patentably distinct species (i.e. species A1 or A2),

The species are as follows:

**Species A1:** a plasma reactor comprising (1) more than two electrodes...; (2) a spacer ...; (3) an electric-conductive coupler... as cited in Figure 4 (appears to be claim 5)

**Species A2:** a plasma reactor comprising (1) more than two electrodes...; (2) a guide structure... as cited in Figure 10 (appears to be claim 29)

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims

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subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: “a plasma reactor comprising more than two electrodes” is the special technical feature linking Species A1 and Species A2. “a plasma reactor comprising more than two electrodes” is known in the art, such as U.S. 6,464,945. Accordingly, the special technical feature does not provide a contribution over the prior art. Therefore the species election is appropriate.

4. Furthermore, if applicant elects **Species A1 of Group II**, applicant must further elect one of each of the following patentably distinct species (i.e. species B1, B2,B3, B4, or B5, **and** C1 or C2, **and** D1 or D2),

**Species B1:** wherein the electric-conductive coupler comprises plural coupler elements jointed together... as cited in Figure 4 (appears to be claim 6)

**Species B2:** wherein the electric-conductive coupler includes a coupling shaft and a wing which are jointed together... as cited in Figure 9 (appears to be claim 9)

**Species B3:** wherein the electric-conductive coupler includes a coupling shaft and a medium... as cited in Figure 12A (appears to be claim 14)

**Species B4:** wherein a part of the electric-conductive coupler inserted into the non-electric-connecting coupling hole has a smaller outer diameter... as cited in page 13 line 16-18 (appears to be claim 24)

**Species B5:** wherein the electric-conductive coupler installed through an array of the coupling holes on the other side is grounded as cited in page 15 line 6-7 (appears to be claim 26)

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: "an electric-conductive coupler" is the special technical feature linking Species B1, B2, B3, B4, and Species B5. "an electric-conductive coupler" is known in the art, such as U.S. 6,464,945. Accordingly, the special technical feature does not provide a contribution over the prior art. Therefore the species election is appropriate. Applicants are required to elect one of the patentably distinct species (i.e. species B1 or B2 or B3 or B4 or B5).

**Species C1:** wherein the electrode plate comprises a first dielectric sheet plate and a second dielectric sheet plate..., the first dielectric sheet plate has the electric-connecting hole with a smaller diameter..., the second dielectric sheet plate has the electric-connecting hole with a large diameter... as cited in Figure 4 (appears to be claim 13)

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**Species C2:** wherein the electrode plate comprises a first dielectric sheet plate and a second dielectric sheet plate... are boned with a ceramic paste as cited in page 11 line 27 (appears to be claim 21)

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: “an electrode plate comprising a first dielectric sheet plate and a second dielectric sheet plate” is the special technical feature linking Species C1 and Species C2. “an electrode plate comprising a first dielectric sheet plate and a second dielectric sheet plate” is known in the art, such as U.S. 6,464,945. Accordingly, the special technical feature does not provide a contribution over the prior art. Therefore the species election is appropriate. Applicants are required to elect one of the patentably distinct species (i.e. species C1 or C2)

**Species D1:** wherein the spacer has a through hole... as cited in Figure 4 (appears to be claim 22)

**Species D2:** wherein the spacer is made of a glass fiber as cited in page 14 line 5 (appears to be claim 23)

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: “a spacer” is the special technical feature linking Species D1 and SpeciesDA2. “a spacer” is known in

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the art, such as U.S. 6,464,945. Accordingly, the special technical feature does not provide a contribution over the prior art. Therefore the species election is appropriate. Applicants are required to elect one of the patentably distinct species (i.e. species D1 or D2).

Claim 5 appears to be generic claim.

5. Due to the complexity of the restriction requirement, a telephone was not made to request oral election to above restriction requirement.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuyu Tai whose telephone number is 571-270-1855.

The examiner can normally be reached on Monday - Friday, 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/X. T./

Examiner, Art Unit 1795

2/17/2009

/Alexa D. Neckel/

Supervisory Patent Examiner, Art Unit 1795